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ANALYSIS OF THE CURRICULAR OFFERINGS IN SEVERAL INDEPENDENT LIBERAL ARTS COLLEGES.

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THE RANGE OF OFFERINGS IN INDEPENDENT LIBERAL ARTS COLLEGES WAS SURVEYED TO DETERMINE TO WHAT EXTENT PRESENT COURSE OFFERINGS BY DEPARTMENTS ARE REQUIRED TO SERVE THE PURPOSES OF THE INSTITUTION. THE INVESTIGATION EMPLOYED IN THIS STUDY INCLUDED SURVEYING CATALOGS AND OTHER PUBLISHED MATERIAL, COMPILING STATISTICS, GATHERING DATA FROM OFFICIAL RECORDS AND QUESTIONNAIRES, AND COLLECTING OPINIONS THROUGH INDIVIDUAL INTERVIEWS ON THE CAMPUSES OF THE COOPERATING COLLEGES. A RESPONSIBLE OFFICER IN EACH SCHOOL PROVIDED A LIST OF ALL CLASSES BY DEPARTMENT OFFERED IN EACH SEMESTER OF THE ACADEMIC YEARS 1957-58 AND 1958-59. EACH COURSE TITLE WAS FOLLOWED BY THE NUMBER OF STUDENTS ENROLLED, THE CREDIT HOUR VALUE OF THE COURSE, THE CLASS LEVEL OF THE MAJORITY OF STUDENTS, AND THE NAME AND RANK OF THE INSTRUCTOR. THE HEAD OF EACH DEPARTMENT WAS ASKED TO STATE THE NUMBER OF CREDIT HOURS OF INSTRUCTION REQUIRED FOR A MAJOR, AND TO REPORT THE NUMBER OF DEPARTMENTAL MAJORS FOR EACH OF THE 2 YEARS STUDIED. ONE OF THE FIRST FINDINGS OF THE STUDY SHOWED THAT LISTINGS PROVIDE NO RELIABLE INFORMATION ABOUT THE ACTUAL PROGRAM OF AN INSTITUTION. WITHOUT EXCEPTION, CATALOGS SHOWED MORE VARIED INSTRUCTION THAN THE INSTITUTION ACTUALLY OFFERED. (JL)

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ANALYSIS OF THE CURRICULAR OFFERINGS IN SEVERAL INDEPENDENT LIBERAL ARTS COLLEGES

A Report from Earl J. McGrath, Executive Officer of the
Institute of Higher Education, Teachers College, Columbia University,
to the U. S. Commissioner of Education on Contract No. SAE 8193,
Project No. 647, Public Law 531, 83rd Congress

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Teachers College, Columbia University
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FOREWORD

This report presents the findings in a study entitled Analysis of the Curricular Offerings in Several Independent Liberal Arts Colleges done under a contract with the U. S. Office of Education, Public Law 531, 83rd Congress. The inquiry concerned the curriculum of 14 independent liberal arts colleges and the related costs of instruction. These institutions included Allegheny, Beloit, Colorado, Cornell, Davidson, Franklin and Marshall, Gettysburg, Grinnell, Hobart and William Smith, Knox, Marietta, Muskingum, Southwestern at Memphis, and Thiel Colleges.

As Executive Officer of the Institute of Higher Education I wish to express my gratitude to the officers of Government and their advisory committee who made the funds for the study available. It is appropriate to commend the Appropriations Committee of the House of Representatives which several years ago inaugurated the program of research of which this project is but a modest part. Educators generally owe a special debt of gratitude to the chairman of that committee, the Honorable John E. Fogarty of Rhode Island, whose keen perception of the need for educational research and whose statesmanlike initiative are largely responsible for the provision of funds so badly needed to illuminate our most pressing educational problems through objective studies.

Gratitude is also due the presidents of the cooperating institutions and their faculty colleagues. Almost without exception these colleges opened all possible sources of information from which the basic data needed in this study could be obtained. Without stint they made available to the staff of the Institute information of the most confidential nature. The fine cooperation obtained everywhere testifies to the sense of urgency the members of these academic communities feel about the matters with which this inquiry deals.

Readers of this report will observe that in accordance with an initial agreement with the presidents of these colleges the institutions have not, except in a few places, been identified, and only then with the explicit authorization of the president. Anyone desiring additional information about the programs of any of the institutions identified by code number can write to the office of the Institute, and their communication will be passed on to the appropriate college for such action as its president wishes to take.

In part this report parallels the discussion of related problems in Memo to a College Trustee. But it takes a somewhat different approach to the problems of independent liberal arts colleges treated in that monograph. No one can deny that trustees commonly have final, legal responsibility for all aspects of the institutional life of colleges and universities. All informed persons would hope that these men and women would concern themselves with the matters discussed in this publication. Yet, in the final analysis the alteration of the curriculum of educational institutions is a function for which large responsibility has traditionally been delegated to faculties. It was an initial assumption in the present inquiry that no basic change would be made in this customary method of dealing with the educational matters here discussed. Interviews with several hundred persons of diverse station on these campuses amply confirms this assumption.

The facts revealed, however, also demonstrated that too many faculty members have taken too lightly their responsibilities for the larger welfare of the entire academic community. Many seem primarily concerned about the enhancement of the status of their own departments or the advancement of their own personal intellectual pursuits. Severe financial problems related to the curriculum already exist in the independent liberal arts colleges. Indeed, their status in the structure of higher education and in the whole of American society now rests in the balance. The outcome will be determined very largely by the willingness of faculty members to view the entire life of the college objectively, including their own special interests. To the degree that they put the general welfare above departmental and personal considerations the well-being of the liberal arts colleges will be maintained. If they do not do this, these institutions will languish as some have already begun to do. Moreover, if the crisis deepens without appropriate faculty action the tradition of faculty control of the curriculum will necessarily be abrogated by those who have the legal and moral responsibility to preserve and protect these colleges.

The facts in this report deserve the earnest consideration of faculty members in all liberal arts colleges. The report has gone beyond the bare facts to suggest desirable courses of action to correct existing weaknesses. These proposals have been humbly made in the full knowledge that every academic body must work out its own destiny within its own traditions and present conditions of life. But that action is required appears incontestable.

These institutions represent a small selection of the many liberal arts colleges in this country. A more comprehensive and more exhaustive research on the problems treated is needed. The results of this study, however, have sufficient general validity to merit their serious consideration in all similar institutions without delay.

Earl J. McGrath
Executive Officer

ANALYSIS OF THE CURRICULAR OFFERINGS IN SEVERAL INDEPENDENT LIBERAL ARTS COLLEGES

CHAPTER I

PURPOSES OF THE STUDY

The independent liberal arts college was once the backbone, indeed early in our national life, the entire body of American higher education. Though many other members have been added to the academic community, the liberal arts college continues to provide higher education for millions of American youth. In 1958-59, the most recent year covered by this study, the independent liberal arts colleges enrolled 604,399 students.[1] These institutions continue to graduate a host of young men and women who become leaders in the professions, the arts, and public affairs.

Unfortunately, however, the place of the independent college in the entire enterprise of higher education has been declining. In recent decades the large institutions, the publicly and privately-supported universities, have been in the ascendant. In financial resources, student enrollments, and physical facilities they have grown much faster than the liberal arts colleges. All signs indicate that these materially well-favored institutions will enhance their relative position further in the years immediately ahead.

This study proposes neither to criticize nor to praise independent liberal arts colleges, but instead to produce facts of potential value to those who must decide whether these institutions shall live or die, or worse still, continue to exist but in a moribund condition. Thoughtful observers of the academic enterprise have predicted the latter fate unless the liberal arts colleges put their houses in order.[2]

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[1] "Opening (Fall) Enrolment in Higher Education, 1959: Analytic Report," Circular No. 621, U.S. Department of Health, Education, and Welfare, Washington, D.C., p. 16.

Many factors will have a bearing on the decisions which these institutions must soon make if they are to remain viable. One crucial set of such elements consists of the quantity and variety of instruction offered and its appropriateness in the curriculum of a liberal arts college. Accordingly, this inquiry attempts to determine the range and diversity of courses in the several divisions of knowledge in a group of colleges, the suitability of this instruction to the proper purposes of liberal education, and the financial consequences of offering it. To obtain information relevant to these matters, a small group of independent liberal arts colleges was selected in which the curriculum could be examined in some detail and the relationships between curricular offerings and the costs of instruction determined.*

The execution of such a study required substantial resources. Accordingly, the Institute of Higher Education designed a cooperative research project and submitted it to the United States Commissioner of Education for possible support under the provisions of Public Law 531, the 83rd Congress. The Commissioner approved the contract and the study was begun in July, 1959.

In terms of the language of the agreement the research had the over all object of analyzing "the offerings of the various subject matter departments in a selected group of independent liberal arts colleges." It had the subsidiary aims (1) of determining how many different courses of instruction the various departments of instruction offered, (2) of comparing the total credit hours of instruction offered with student enrollments and with the requirements for majors in the various fields of knowledge, (3) of inquiring into the reasons advanced by members of the administrative and teaching staffs for offering advanced courses which attracted only a few students, and (4) of making a pilot analysis of teaching costs (salaries only) in two institutions. This latter pilot study was intended to produce techniques applicable to a larger and more complex group of institutions. The results of the study proved sufficiently promising to justify a request for a small additional grant to extend the study of costs to eleven of the other original thirteen institutions. An amendment to the original contract provided these supplementary funds.

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[2] Beardsley Ruml and Donald H. Morrison, Memo to a College Trustee (New York: McGraw-Hill Book Company, Inc., 1959).

*Though the results of this inquiry are considered reliable as they stand, it would be advantageous to enlarge the number of institutions in a further study, and to include liberal arts colleges which are part of large universities.

In its concluding stages the study included a review of the curricular offerings in fourteen independent liberal arts colleges and a cost analysis in thirteen of them.* One institution had to be excluded entirely because of the difficulty of equating quarter and semester hours. The president of another college did not feel free to release information about faculty salaries. Hence this institution was included in all other parts of the inquiry, but not in the analysis of instructional costs. These few institutions obviously cannot be considered a statistically reliable sample of all the colleges of the country. Those who selected the institutions, however, gave due regard to geographic location, size, types of students enrolled and church or non-church relatedness. Studies made by the Institute of Higher Education suggest that some aspects of the institutions considered in this study might vary somewhat in similar institutions. In the main, however, these colleges are considered as representative as such a small sample could be.

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*The following institutions participated in this study: Allegheny, Beloit, Colorado College, Cornell College, Davidson, Franklin and Marshall, Gettysburg, Grinnell, Hobart and William Smith, Knox, Marietta, Muskingum, Southwestern at Memphis, and Thiel.

Methodology Employed

The methods of investigation employed in this study included a survey of catalogues and other published material, compiling statistics, gathering data from official records and questionnaires, and collecting opinions through individual interviews on the campuses of the cooperating colleges. A responsible officer in each school provided on standard forms a list of all classes by department (including tutorial and other forms of individualized instruction) offered in each semester of the academic years 1957-58 and 1958-59. Each course title was followed by the number of students enrolled, the credit-hour value of the course, the class level of the majority of students (freshman, sophomore, junior, or senior), and the name and rank of the instructor. The head of each department was asked to state the number of credit hours of instruction required for a major, and to report the number of departmental majors for each of the two years studied. 66

A comparison of the courses listed in the catalogue with those on the forms disclosed that departments gave some courses only in alternate years, some courses listed had not been given for these two years, and others not listed had actually been given. One of the first findings of the study showed that usually catalogue listings provide no reliable information about the actual program of an institution. Without exception, catalogues showed more varied instruction than the institution actually offered. Since students use these publications to decide whether a particular institution meets their needs, and since other institutions use these same documents for a variety of purposes, the ethics of publicizing many types of instruction not actually offered appears questionable./249

Because of the unreliability of catalogue listings, the analysis of curricular offerings in this study is based on the information supplied on the forms. From these data it was possible to collate such facts as the number of hours of different types of instruction offered by each department and taught by each instructor, and the number of classes of various sizes. On separate schedules thirteen colleges also reported the salary of each teacher. In the case of teachers who served only part time this factor was taken into consideration in the determination of instructional costs.

These facts collected through the use of standard forms were supplemented by interviews and personal correspondence (sometimes voluminous) with presidents, deans, and department heads. Conversations with these persons provided information concerning the procedures followed in introducing or eliminating courses, justification of the continued offering of classes with few students, and plans for the internal study of the matters included in this project.

All the colleges which supplied information are old, reputable, fully accredited institutions. Typically they offer the Bachelor of Arts degree. Some also award the Bachelor of Science degree. A few grant special degrees in professional fields. Five of the fourteen colleges offer master's degrees in a very few departments, but the number of graduate students in the two-year period studied was negligible.

Dynamics of Curricular Change

This study was designed primarily to produce information concerning certain aspects of the curriculum in independent liberal arts colleges and the costs of instruction. The original conception included no consideration of the dynamics of curricular change. As the inquiry proceeded, however, certain important factors in institutional life pertaining to the structure and the adaptability of the curriculum frequently emerged; for example, the responsibility of faculties for changing existing policies and practices to achieve a more efficient operation of the whole academic enterprise. As the interviews progressed it became clear to the investigators that faculties have not only the right but the responsibility to undertake critical and continuing reviews of institutional offerings and to maintain an educational program consistent with the purposes of a liberal arts college. A related publication suggests that in the urgently needed reduction of the offerings of liberal arts colleges, the board of trustees ought to take the primary, if not the sole, initiative.[3]

The present inquiry leads to the conclusion (substantiated by many interviews and considerations of academic tradition) that in the long run the ends of higher education will be better served if the trustees limit themselves to their proper general supervisory functions. In connection with the matters here being studied, this would include their asking for facts and figures regarding the size of classes and the range of departmental offerings which would disclose whether or not the instructional program is consistent with the declared purposes of the institution. After studying these materials the trustees might then work cooperatively with the president and the faculty in initiating such modifications in program as seem desirable to all concerned. This procedure continues the traditional faculty control of educational policy and practice, but it would also assure appropriate action without the intolerable delays which sometimes afflict academic bodies.

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[3] Ruml and Morrison, op. cit.

Faculty Salaries

The facts produced by this inquiry and substantiated in others[4] with regard to the high cost of small classes and their relationship to salaries indicate that whether they recognize it or not, faculties have a large stake in plans for making the institutions with which they cast their lot, often for life, operate at maximum financial efficiency. Some may question the propriety of beginning a report of this type with a discussion of some of the financial implications of curricular structure. The primary purpose in doing so is to enlist the active interest of those most concerned in implementing the practical implications of the findings.

The evidence is abundant in this study and in others that the future quality of education, and probably its status, in independent liberal arts colleges will be determined by their ability to use their limited financial resources more effectively than they presently do. Specifically, salaries must rise quickly and substantially if enough teachers of suitable quality are to be available to these colleges. The relationship between curricular offerings and the compensation of faculty members has not been adequately studied. During the years of the great depression, however, some institutions maintained salaries at a relatively high level by reducing the number of courses scheduled, and using the resultant savings to support salaries. Referring to the policies of one university at that time, Seymour E. Harris shows that salaries might be raised today by more careful management of the curriculum. He observes that:

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[4] Floyd W. Reeves, Nelson B. Henry, and John Dale Russell, Class Size and University Costs (Chicago: The University of Chicago Press, 1933), p. 84; Committee on the Conduct of the Study of Higher Education in California, A Restudy of the Needs of California in Higher Education (Sacramento: California State Department of Education, 1955), p. 447.

> Faculty pay would be much higher if faculties were more disposed to economize without seriously affecting the educational product. What can be accomplished is suggested by President Hutchins' experience in the Great Depression at Chicago. The faculty dropped 450 courses when the President announced that the one objective was to maintain faculty pay. This the faculty achieved by a drastic reduction in the college offering.[5]

The teaching profession has demonstrated commendable idealism and self-abnegation in placing the ends of education above personal monetary considerations. But they cannot realistically continue to do so without hazard to their own economic status, the continuous replenishment of the profession with needed personnel, and the quality of the educational program. This statement applies with particular force to the type of college considered in this study.

In recent years the independent college has enrolled about 20 per cent of the nation's college and university students. Informed persons believe that by 1970 the number of American youth seeking a higher education will double. If this increase occurs, and if the quality of college education is not to slump, colleges will have to find approximately 59,000 new teachers in the next decade, roughly 35,000 to replace those now in service and 24,000 to teach additional students.[6] Moreover, if these colleges are to attract and hold qualified staff members, their salaries cannot remain at the present comparatively low levels. In 1959-60 the average (mean) salary for faculty members in private independent liberal arts colleges was $600 below the scale in publicly-supported colleges of the same type, close to $1,000 below that in publicly-supported universities, and $1,500 below that in privately-supported universities.[7] To compete successfully for qualified teachers, these colleges will have not only to raise existing salaries proportionately with other institutions. They will have to close the present gaps between their own and salary schedules in other types of institutions. In his survey and projection of the financial obligations of institutions of higher education Harris assumes a 100 per cent increase in faculty salaries.[8] If the present student-faculty ratio continues, the necessary additional expenditure for salaries will run into hundreds of millions of dollars -- more funds than realistic assessors of the situation believe the customary sources of revenue can produce. Hence additional income must be derived from more efficient operation of the various services the colleges provide. These stubborn facts of academic life indicate clearly that the liberal arts colleges must seize every opportunity to make maximum use of all their resources, actual and potential, if they are to survive and to make their traditionally significant contribution to American life. This study produces facts which illuminate existing problems of curricular structure, the use of staff, and the employment of institutional resources. But the report goes somewhat beyond the presentation of bare facts to propose action which seems necessary for the colleges to take if they are to preserve their quality, and perhaps their very existence as privately-supported liberal arts colleges.

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[5] Seymour E. Harris, "I. Introduction: Some Broad Issues," in Higher Education in the United States (Edited by Seymour E. Harris), p. 18.

[6] "Teacher Supply and Demand in Universities, Colleges, and Junior Colleges, 1957-58 and 1958-59," Research Report, 1959-R10, Research Division, National Education Association, Washington, D.C., pp. 7, 50, 51.

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[7] United States Office of Education, Higher Education Planning and Management Data, 1959-60 (Washington: United States Government Printing Office, 1960), pp. 20 and 18.

[8] Seymour E. Harris, "The Economic Aspects of Memo to a College Trustee," Journal of Higher Education, 30:445, November 1959.

CHAPTER II

PRESENT OFFERINGS AND MAJOR REQUIREMENTS

One aspect of this study relates to the number of credit hours of different types of instruction offered by the fourteen institutions. These summary figures on departmental offerings are compared with total full-time enrollments to discover to what extent, if at all, the richness of the curriculum varies with the number of students enrolled. Further relationships are analyzed to discover whether, in view of the average offerings in the whole group of colleges, some appear to be providing an excessively diversified program of studies. Lastly, figures are presented showing the connection between the number of different courses offered and the number of credit hours required for a major in the several subject-matter fields.

Total Credit Hours of Instruction Offered

Table I ranks the fourteen colleges according to their enrollments and lists the number of credit hours of instruction offered by each during the academic years 1957-58 and 1958-59. The figures in Column 3 (credit hours offered) and similar figures in later tables were derived from information about individual courses supplied by administrative officers rather than from catalogues. Hence they accurately represent the instruction actually offered in these two academic years. The figures show the total of different units of instruction, regardless of the year in which they were offered. That is, credits for courses offered in the second year were added to the total for the first year only if they pertained to courses not offered in the first year. If, for example, The History of England, carrying 6 hours credit, had been offered in both 1957-58 and 1958-59, only 6 hours, not 12, were included in Column 3. Courses divided into sections, such as the usual course in Elementary English were likewise counted only once. Any course which appeared in the catalogue in either year but enrolled no students during the two-year period was disregarded. Though courses varied in credit value, three hours represented the average. Accordingly, a fairly reliable index of the number of semester courses given can be obtained by dividing the total credit hours in the right-hand column by three.

In Table I one fact stands out prominently. These fourteen institutions, all of which purport to provide a liberal education, differ arrestingly in the scope of their instructional programs. The college with the greatest variety of instruction scheduled 1387 credit hours, almost double the least, with only 773.5. An even more significant fact revealed in Table I is the absence of any close relationship between total enrollment and the range of instruction. College 14, for example, with the fewest students, 620, furnishes about the same number of courses as College 11, with more than 2½ times the enrollment, 1590 students. The highest number of credit hours (institution 4) exceeds by about 267, or roughly 89 courses, the middle (median) figure for the total group. There is a correlation of +.05 between enrollment and amount of instruction offered which means that these institutions have not adjusted the range of their offerings to the size of their student bodies. It may be that there is a minimum below which a college cannot fall and still provide the essential elements of a liberal education. If so, this fact would argue for an enrollment sufficiently large to make the offering of this indispensable instruction economically defensible.

TABLE I

ENROLLMENTS 1958-59 AND CREDIT HOURS OF INSTRUCTION OFFERED IN THE ACADEMIC YEAR 1957-58 PLUS ADDITIONAL CREDIT HOURS OF DIFFERENT COURSES OFFERED DURING 1958-59*

1	2	3	4
Institutional Code Number	1958-59 Enrollments	Credit Hours Offered	Ratio of Column 3 to Column 2
14	620	1117	1.80
2	734	1114.5	1.52
7	785	773.5	.99
5	844	1242	1.47
10	910	834	.92
4	938	1387	1.48
12	1011	1147.5	1.14
9	1015	1321	1.30
1	1025	1174.5	1.15
8	1145	914.5	.80
6	1155	1048	.91
13	1164	1126	.97
3	1228	1069.5	.87
11	1591	1124	.71
Range	620-1591	773.5-1387	.71-1.80
Median	1013	1120.5	1.07

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*Programs in music and art including a large number of performance and studio courses were omitted from this and other tables because they distort the average so decidedly toward the low end of the scale. None of the tables incorporates figures on ROTC or AFROTC programs. Separate calculations revealed that the ranks of the institutions in Column 2 would have remained substantially the same if enrollments for both years had been used. In Column 3, credits for courses offered in 1958-59 were added to the total only if they had not been offered in 1957-58.

Another interesting expression of the relationship between the amount of instruction offered and enrollments can be found by calculating the ratio of the former to the latter. When these figures are derived they show that in seven of these colleges the hours of instruction exceed the number of their students. The ratios vary from .71 to 1.80.

Dissimilarities in number and organization of departments in the several colleges account to some extent for the variations in the number of their offerings. Some colleges, four in this study, have subject-matter departments, such as Home Economics, entirely missing in others. On the other hand, nine colleges combine the departments of Business Administration and Economics, while three separate them. Two have only an Economics department with no Business Administration. When unified, the constituent departments generally offer a smaller complement of courses than when separated. The curricular picture is further obscured by the practice of some colleges of providing instruction in a professional field like Engineering, or General Education courses which often fit into no department. The generalization that the more departments and special programs a college has the larger will be the instructional offering has some validity. But other factors also influence the total range of instruction.

Differences within Subject-Matter Areas

Variations in the quantity of instruction offered within subject-matter departments, such as French and physics, most significantly influence the present wide institutional differences. Table II presents the relevant figures on this point. It also represents the maxima and minima in each subject-matter area without regard to the extent of an institution's total program. College 4, for example, which tops all others in total offering,

TABLE II

RANGES OF CREDIT HOURS OFFERED IN MAJOR SUBJECTS IN 14 SELECTED LIBERAL ARTS COLLEGES

SUBJECT	CREDIT HOURS MINIMUM	CREDIT HOURS MAXIMUM	DIFFERENCE BETWEEN MINIMUM AND MAXIMUM
Biology	38	98	60
Chemistry	37.5	83.5	46
Classical Languages	42	53	11
Economics	39	84	45
Economics and Business Administration	51	108	57
Business Administration	33	73	40
Education	38	82	44
English	54	146	92
French	27	64	37
Geology	37.5	58	20.5
German	22	52	30
History	42	81	39
Home Economics	41	54	13
Mathematics	38	94	56
Philosophy	30	57	27
Philosophy and Religion	51	91	40
Physics	37.5	73	35.5
Political Science (Government)	27	81	54
Psychology	21	71	50
Religion (Bible)	25	48	23
Sociology	24	64	40
Sociology and Anthropology	36	53	17
Spanish	24	63	39

could be the same institution which offers the least, 54 hours, of instruction in English. Although many of the low-offering departments are in the institutions with low totals, the agreement is by no means perfect.

This table includes only departments with majors found in at least three colleges. To compare a Sociology department in one institution with only 18 hours of instruction, for example, and no major with another which provides the range of basic courses required for a major would be misleading. Each department in Table II not only provides courses for the liberal education of students whose chief academic interests lie elsewhere, but also furnishes the sequence of courses generally required for admission to related graduate departments. Because only departments with at least a major offering were included, the widely disparate figures in Table II are all the more significant.

These comparisons of the offerings in similar departments in different institutions present a provocative picture. Many factors combine to explain the departmental differences from college to college. Traditional departmental strength, personal subject-matter sympathies of administrators, citizen interest in a particular field (such as geology in Colorado), the research activities of faculty members, and other forces account for the continuance of some instruction which could be dropped without damage to, and sometimes with an enhancement of, undergraduate liberal education. If these old and accredited colleges declare the liberal education of American youth to be their primary reason for being, and if, as has been shown, little relationship exists between the number of courses offered and the number of students enrolled, the question may properly be raised as to why one faculty considers 146 hours of instruction in English essential, while another, including the members of the English department, considers 54 hours adequate. Likewise, why does one college require 81 and another only 42 hours of history?

The answers of institutions' representatives to these and related questions will be reviewed later. Table II shows, however, that in 12, or over half, of the departments the highest and lowest figures differ by at least 40 credits, the equivalent of about 13 average semester courses. In five of the fields, Biology, Economics and Business Administration, Mathematics, Political Science, and English, the difference amounts to 54 or more credits, at least 18 courses. In all but four fields, the lowest department differs from the highest by at least 23 credit hours of instruction. The departments with the smallest variations are classical languages with 11, home economics with 13, and sociology and anthropology with 17 credit hours. The largest variation, 92 credit hours, in English, amounts to roughly 30 courses, three times the amount of instruction prescribed by these departments themselves for a major.

An analysis of the courses in each discipline suggests that the chief factors producing the variations in Table II are: (1) the number of special branches of a subject covered, (2) the amount of advanced specialized instruction undergraduates are permitted or encouraged to take in their major field, and (3) the use of tutorial or individualized instruction. Many examples could be drawn from these colleges to show the effect of these policies and practices, but all three reveal themselves in one of the political science departments. This department exhibits (1) an unusual proliferation of courses in the various branches of the subject, (2) much advanced specialized instruction, and (3) a program of individualized teaching. In this college, which represented the maximum of 81 credit hours in political science offered in the two-year period studied, the department enrolled students in 25 different courses including: 2 courses in general education, 2 in American Government, 2 in political parties and public opinion, 2 in foreign policy of the United States and the USSR, 3 in law, 3 in international relations and organization, 3 in comparative government, 2 in administration, 2 in political theory, as well as 2 seminars and 2 units of tutorial or independent instruction. In all three respects the college at the minimum end of the scale in political science shows a dramatic contrast to the institution just described. In the two-year period it offered 27 hours of instruction in 9 courses: 2 courses in American government, 2 in comparative government, 2 in comparative government, 2 in political theory, 1 in international relations, 1 in political parties, and 1 in government and business.

To some degree these marked differences in departmental programs result from the traditional freedom which colleges, and their constituent departments, enjoy in designing an undergraduate curriculum in accordance with their own educational philosophy, resources, and clientele. Most students of American higher education believe this autonomy to be an essential factor in the effectiveness with which our colleges and universities meet the varied needs of a dynamic democratic culture. A legitimate question can be raised, however, as to whether the program of 81 hours in political science is consistent with the proper purposes of a liberal arts college, or whether instead in considerable part it reflects the objectives of graduate or professional education.

Undoubtedly a basic factor in the excessive expansion into specialized branches of a subject which attracts few students is the desire of departments to increase the number of majors. To do this they try to serve students with ever more varied intellectual interests. Even if this practice were educationally defensible in a liberal arts college, it is highly questionable whether a small college with limited resources can afford the luxury of such a plentiful subject-matter table. Regardless of the answers to foregoing queries, Table II permits at least one undeniable generalization. Some departments in all of these colleges furnish a considerably greater variety of instruction than comparable units in other institutions consider essential to achieve the purposes of undergraduate liberal education.

Credit Hours Required for Majors

Other facts related to the scope of departmental offerings support this conclusion. If the primary mission of these colleges is to provide a sound liberal education, the quantity of instruction in their various constituent departments ought to be roughly equal to the requirements for a major. In some instances the demands of other departments might raise these figures somewhat, but in most departments these services should be negligible.

In view of the standards set by major requirements, this study undertook to determine to what extent departmental offerings equalled those requirements. The results presented in Table III show for each college: the median percentage that major requirements constitute of the total credit hours offered in each department (Line I); the number of departments that provided at least 40 per cent more credit hours than were required for a major (Line II); the total number of departments in each of the 14 colleges (Line III). The medians in Line I show the percentage of the total of departmental instruction required for a major which stood halfway between the lowest and the highest. That is, half of the departments offer less than the median of the total hours required for a major and half offer more.

The most significant fact in Table III is the extent to which the

TABLE III

REQUIREMENTS FOR MAJORS IN DEPARTMENTS OF 14 COLLEGES RELATED TO THEIR TOTAL DEPARTMENTAL OFFERINGS*

Line		College Code Number													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
I	Percentage major requirements were of total credits. Median by departments.	59%	53%	56%	50%	40%	58.5%	56.5%	69%	48%	76%	47%	62.5%	52.5%	51.5%
II	Number of departments with over 40% beyond the major requirement	12	14	13	14	14	10	8	4	14	2	13	8	11	14
III	Total departments in college offering majors	21	21	19	19	17	20	14	19	19	19	18	18	20	18

* "Total Departmental Offerings" covers the credit for courses given in 1957-58 and the additional courses, different from 1957-58, given in 1958-59. Credits for courses offered in 1958-59 were added to the total only if they had not been offered in 1957-58.

median departmental offering exceeds the amount of instruction it itself requires for a degree. These figures permit the deduction that departments almost invariably schedule many more courses than they themselves consider acceptable or necessary for a bachelor's degree in the field. Even in institution 10, in which the median department comes closest to the minimum number of hours of instruction required for a major, this department offers 24% more instruction than required. In institution 5, at the other extreme, the major requirements in the median department constitute only 40% of the total outlay of intellectual fare. That is, more than half the departments in this institution exceed the needed range of instruction by more than twice. Some departments in some institutions treble the number of courses needed for a major.

Line II in Table III reveals substantial institutional variations in the scope of departmental offerings. In one college only two departments offered at least 40 per cent more instruction than the amount required for a major, while in five others 14 departments exceeded this figure. In college 5 only three departments fell below the 40 per cent level, which means that almost all departments taught approximately twice the number of courses required. Of the 262 departments in these colleges, 151, or nearly three out of five offered at least 40 per cent more credit hours than they required for their majors. These figures show that most departments in the participating colleges offer a considerably greater percentage of hours of instruction than they need to meet their own specified requirements for specialization.

The Defense of Small Classes

The figures in Table III which show that the requirements for the major in most departments account for 60 per cent or less of the total offering revive earlier considerations concerning the financial problems of liberal arts colleges. A positive correlation (r = .414) exists between the number of classes in these colleges with fewer than 11 students and the number of different courses offered. That is, extension of the offerings tends to be accompanied by an increase of small classes. Since the per-student cost is much greater in small than in large classes, deans and department heads were interrogated concerning their reasons for continuing courses with few students. Several justifications were made. Some defended small classes on educational grounds. They attached considerable value to the individual attention which classes with few students made possible. Others considered these lightly populated courses warranted as essential elements in a well-rounded program in a particular field. The program in political science, described on page 17, was excused on the ground that such a varied offering was needed to provide suitably diversified programs for students of differing interests. Others made essentially the same point by declaring that only a full complement of specialized courses could provide the different majors required within a discipline.

Some deans declared that faculty policy required departments to offer tutorial instruction or seminars which by their very nature had to be limited to one or at most a few students. Lastly, some department heads asserted that colleges had a responsibility to prepare students for graduate school, and such preparation necessarily involved particularized advanced instruction in the specialized branches of a subject which normally attracted small enrollments. This point of view, which other evidence suggests was more prevalent than admitted, probably reflects the desire of department heads to have their students excel in comparison with other graduate students in the amount of their specialized knowledge in a given field. Yet it is a view which does not generally conform to the expressed opinions of graduate faculties in the strong institutions. The latter say that they want students to come to their graduate work with a thorough grounding in theory basic to further, more specialized instruction in one of the branches of a discipline.

The second general reason given by deans and department heads in defense of advanced courses with small enrollments concerned the institutions' ability to attract and hold qualified faculty members. They expressed the opinion that the small colleges, which increasingly compete with larger institutions for capable teachers, must use a variety of lures. One such attraction is the opportunity to teach courses in a specialized field of scholarly interest. Since this instruction usually treats subject matter in the advanced stages of a discipline, it typically attracts few college students.

Many representatives of the English departments in this inquiry defended a diversified array of specialized courses on the ground that the opportunity to give advanced instruction in their specialized field drew to the institution teachers of scholarly achievement who might otherwise decline an appointment. Hence some of these departments offered such courses as Biography, Milton, and Theory of Literature, with consistently small enrollments.

The recruitment of staff members in English departments is complicated by the almost universal requirements in English composition and literature involving many sections of 25 or 30 students. Larger institutions with graduate departments often man these classes, considered chore work by many senior staff members, primarily with those of lesser rank. Because the latter are often simultaneously completing the requirements for a doctor's degree, they are for the time being willing to devote their full teaching time to elementary instruction. After fledgling scholars receive their degrees, however, they find in the independent colleges, unlike the universities where older members of the profession have already preempted their own subject-matter specialties, an opportunity to offer at least one course connected with their doctoral study. These opportunities to give advanced specialized instruction related to their research interests, the chairmen declared, enabled liberal arts colleges to compete more successfully with larger institutions than they otherwise could. Some department heads, going beyond mere expediency, asserted that a faculty member who had begun a scholarly career in a specialized branch of a subject had the right, as a matter of principle, to teach it.

Administrative officers gave a third reason for scheduling courses with few students. They observed that some departments had to engage a minimum corps of faculty members especially prepared to teach several advanced but indispensable subjects, and that the demand for elementary instruction was not sufficient to make full use of the rest of their time. A department, for example, embracing both economic theory and business administration might need four types of teachers with different academic interests: one specialist in economic history; one in economic theory; one in accounting; and one in some of the other business subjects. Urban institutions sometimes engage part-time teachers of the latter subjects, but many of the smaller liberal arts colleges, remote from cities, must employ full-time staff members if they wish to offer adequate majors. Some department heads, concerned about the expense and the splintering of the curriculum resulting from this practice, declared that they held no particular brief for introducing the resulting specialized instruction into a liberal arts program, and would willingly abandon this practice if the staffing problem could otherwise be solved.

The views of deans and department heads who defended advanced courses with small enrollments may be summed up in two propositions: these courses constitute essential elements in an undergraduate liberal education; such instruction must be offered to attract qualified teachers.

Other persons in similar positions hold quite different opinions on this subject. Indeed it was considered desirable to solicit the opinion of those who have had an opportunity to observe any deleterious effects of a restricted range of offerings, namely, the heads of departments with modest programs. To obtain information on this subject a letter containing four questions was addressed to the appropriate departmental chairmen in the fourteen participating colleges:

1. Do the courses in your department provide a basic liberal education in the subject for all students, non-majors as well as majors?
2. Have graduates of the department maintained satisfactory records in their later academic work?
3. Have the majors in the department encountered any difficulty in gaining admission to graduate or professional school?
4. Have they had to make up deficiencies in background after they had entered graduate study?

An almost 100 per cent response to these letters permitted some convincing generalizations. These opinions may, of course, be biased. They have to be evaluated as the views of men and women who doubtless have already accepted the principle that by proper planning a liberal arts department can keep its offerings at a level only slightly above the number of courses required for a major without damage to the student's education or to the institution's reputation. Detailed research on this subject would provide more definitive information concerning the success of students from small and large departments in graduate schools. In the meantime there is no more reason to expect bias on the part of these chairmen who preside over departments with few courses than from those referred to earlier who manage more pretentious academic units. To suspect the latter is probably more justifiable, because they are defending established interests.

In any event, as far as the data obtained from heads of small departments are concerned, Questions 1 and 2 were answered affirmatively; 3 and 4, negatively. A large majority asserted that they considered their department's offerings suitable components in a program of liberal education. Few had any evidence that their graduates had to make up scholastic deficiencies or that they were unable to maintain creditable records in postgraduate studies. Those few department heads who knew of exceptions to this statement considered them atypical. They expressed the view that deficiencies were not related to the breadth or depth of the students' undergraduate studies, but rather to other factors related to academic success. With one exception they held the conviction that their programs as presently constituted were satisfactory and effective. Five heads stated their intention of adding a few courses, but not because the present offerings did not adequately provide a suitable liberal education or prepare students for advanced study.

These department heads declared unanimously that their students with satisfactory undergraduate records had had no difficulty in gaining admission to graduate or professional schools; some named the schools, and added evidence that a number of their students had obtained fellowships, scholarships, and assistantships at first-rate graduate institutions. It has been contended that a bare essential offering inadequately prepared students for graduate study. This view, however, is evidently not shared by top-ranking graduate schools if we are to accept as suitable evidence the reports of these departmental chairmen on the graduate school admission records of their students.

Some departmental heads augmented their "yes" and "no" answers to the questions with their personal reasons for keeping departmental offerings within modest scope. A few typical quotations from these letters, authorized by the correspondents, illustrate the principal views expressed. Unless otherwise indicated, all the statements cited represent verbatim quotations.

Two expressions of opinion concern the quality of the student's preparation for graduate or professional school. Professor Herbert E. Hendriks, Chairman of the Department of Geology at Cornell College, explains that a selected range of instruction in a discipline provides the soundest basis for further study.

> I am well aware that our course offerings in geology...are below the average number of credits and courses offered in similar departments. This fact has not disturbed me, because this is the way I have planned our offerings. Most major departments in undergraduate colleges have far too many specialized offerings. We offer our majors only enough basic course work to provide a sound foundation for graduate work in geology, for we feel that...the student... /is/ better served by.../study/ in mathematics, the supporting sciences, and the humanities.
>
> Our majors, far from having trouble getting into graduate school, are sought out....They generally maintain a fine graduate record and.../experience/ no delays in getting their graduate degree or degrees.

Professor William H. Parsons, Chairman of the Geology and Geography Department at Allegheny College (not included as one of the smallest departments because it combined the two subjects), which offered a total of 38.5 credit hours of instruction, added weight to the convictions of Professor Hendriks by citing the views of leading scholars. He wrote:

> I have discussed our program with spokesmen of geology departments of several major universities, and it is my conclusion that they

> distinctly prefer a limited number of hours properly presented in preference to a heavy undergraduate major load.

The foregoing quotations attest the general effectiveness of a compact, nonspecialized undergraduate major. The statement of the Chairman of the Department of Mathematics at Davidson College, Professor W. G. McGavock, bears more closely on the specific questions concerning admission to, and success in, graduate or professional school:

> Our men have been accepted at Duke, University of North Carolina, Tulane, Yale, University of Washington, and University of Virginia, and students who had a joint major in Mathematics and Physics or Physical Chemistry have been accepted at M.I.T., Columbia, University of Virginia, Vanderbilt, Purdue, Stanford, University of Florida, Duke, and University of North Carolina. Most of these men received outstanding Scholarships or Graduate Assistantships. In the Spring of 1960 [our] students were awarded nine Woodrow Wilson Fellowships. Three of these were in Mathematics. Of the 4 top men selected for recommendation to the Danforth Foundation 3 were mathematicians.

Two additional statements concern inadequacies which students may have later discovered in their undergraduate education, or deficiencies they may have had to make up after admission to graduate work. The first, from Professor Paul L. Whitely, the former chairman of the department of psychology at Franklin and Marshall, considers these matters indirectly by commenting on the proper functions of a liberal arts college; the second, from Professor George L. Abernethy, Chairman of the Department of Philosophy at Davidson, supplies direct testimony from former students about the adequacy of their undergraduate major.

Professor Whitely stated:

> ...it is my conviction that the function of a liberal arts college is not to give highly specialized courses, which belong to graduate training. Thus while many of our students have gone into clinical psychology, we never gave a course in [the] subject. But with a grounding in basic psychology, my observation is that all of these students, as well as those interested in experimental psychology, have made satisfactory records in graduate school.

Professor Abernethy wrote:

> ...I have talked with each of our majors who has done any graduate work in philosophy. They have all agreed that initially they were handicapped in competition with other graduate students in... philosophy of science and contemporary language analysis, but that this disadvantage disappeared before the end of the year. On the other hand, they felt they were better prepared in the History of Philosophy and Philosophy of Religion than those who had come from departments where analytical philosophy is a major emphasis.

Like the foregoing statements, virtually all the other replies from heads of departments expressed satisfaction with their present departmental programs. Even those few who contemplated expansion expressed the view that their majors had, in general, obtained ready admission to graduate study and had maintained satisfactory records. One head, A. G. Griffin of the Department of Economics at Davidson, which now has only a very modest offering, asserted existing courses might be further reduced:

> It is my impression that our list of offerings in Economics is reasonably and relatively extensive. Certainly we have more courses than any individual takes.... My own personal preference is for a reduction in our offerings, if that could be accomplished without neglect of significant subject matter areas.

Professor Robert E. Bugbee, Chairman of the Department of Biology at Allegheny, particularly deserves quotation, for he deals with the matter of giving each staff member an opportunity to cultivate his specialty without prohibitively inflating an undergraduate department. Because Professor Bugbee is a productive scholar, his testimony should carry added weight among those who believe that advanced specialized instruction is the sine qua non of the college teacher's continuing interest in scholarship.

> My aim as Head of the Biology Department has been to prevent teachers from spreading themselves too thin and trying to teach everything that could be included under a biology curriculum. It seems to me more reasonable to have each one teach an introductory course and two additional courses.... If you will look over our offerings, you will find that the active fields of biology are well represented, but that we do not offer many specialized or restricted areas except [in a few cases where the instructor is particularly well qualified].

These typical statements show that heads of small departments in the colleges as a group believe overspecialization in a liberal arts college to be undesirable and unnecessary. One other statement, from the Chairman of a History Department with limited offerings, Professor William L. Fisk of Muskingum, ought to be added because he offers an explanation for subject-matter proliferation in undergraduate colleges. Observing that history departments in some of the most distinguished colleges and universities offer a "very small number of courses," he then goes on to say:

> I have for some time felt that graduate education in History is becoming increasingly characterized by sequences of courses built around the field of every assistant professor in every university .... This trend indirectly influences professors in liberal arts colleges....
>
> My own tentative [explanation] is that there is a tendency in higher education for graduate schools to expect an entering student to have decided upon his specialization in History and to have completed all general courses in that area.... This is an unreasonable demand..., and it forces liberal arts History departments to adopt curricula specifically preparatory to popular university departments, a trend I consider contrary to the function of liberal arts colleges.

The letters clearly show that when departmental chairmen seriously consider the over-all purposes of a liberal arts college they generally favor having students take a limited range of basic instruction in one department supported by a broad knowledge of other disciplines. Many deprecate the practice of offering narrow courses which excessively proliferate the curriculum and fragmentize undergraduate education. The Chairman of the Chemistry Department at Thiel, Professor Walter H. Puterbaugh, represents the common view among the heads of small departments toward the place of a specialized major in the total program of a liberal arts education. He says:

> We believe our departmental curriculum achieves our aim by providing a sound and thorough training in chemistry within the framework of a liberal arts curriculum. I and my departmental colleagues are thoroughly in sympathy with the aims of liberal

> education, and we are not anxious to provide a large number of subsidiary courses.... The undergraduate years provide for many the last formal opportunity to develop appreciation and interest outside their field, and we feel the opportunity for this should not be excluded by a proliferation of major courses.... Our ideal is to offer a sound basic program in chemistry on which our outstanding majors can properly build by intense specialization at the graduate level.

Chairmen who accept this view also generally believe that in a carefully designed program the major subfields in a discipline can be adequately covered by a few courses. They also seem to believe that an emphasis on the quality of instruction in a few basic subjects rather than experience with a wide variety of advanced courses will assure an adequate knowledge of a major field within the framework of a liberal education.

The foregoing facts suggest that those who wish to preserve and strengthen the liberal arts colleges ought to appraise the present programs of these institutions in terms of answers to the following four basic questions:

1. Is much of the advanced specialized instruction which now constitutes an integral part of the curriculum inconsistent with the proper purposes of undergraduate liberal education?

2. Since thoroughly reputable colleges offer few such specialized courses, without impairing the education of their students or damaging their institutional prestige, is such generally expensive instruction defensible?

3. Does not an elaborate proliferation of courses actually weaken, as some deans and department heads believe, rather than strengthen the department's program?

4. Cannot alternative devices be found to solve the problem of faculty recruitment and retention?

An answer to the first of these questions must stem in part from a review of the purposes of these colleges. Without exception their published statements show their dominant purpose to be that of providing an undergraduate liberal education. Though differing somewhat in the means they use to achieve this end, the colleges in this study, and many others as well, would generally subscribe to the following statement of goals in the catalogue of one of the participating institutions:

> American higher education...has been founded upon the liberal tradition, which is fundamental to a civilization of free men. From the Hebrew-Christian tradition has come the root principle of democracy, the dignity and worth of the human individual. But the individual can realize his highest capabilities only through the discipline of sound learning, a discipline which leads to self-discipline, a learning which, because it is rooted in the Christian philosophy of life, encourages breadth of vision, ability to weigh evidence, a sense of values, and a due respect for the opinions of others.
>
> The basic purpose of a liberal education is to develop a well-rounded personality and to prepare for rich and full living. The full development of mental powers and the building of character are its most important purposes, and it is, therefore, concerned with thorough scholarship, good manners, and good morals.[1]

If providing a liberal education for American youth continues to be the controlling aim of these colleges, all aspects of institutional life, especially the subjects of instruction, ought to be assessed in terms of their contribution to this end. All instruction serving other purposes, however worthy, ought to be cut away. Expensive instruction which needlessly anticipates specialized graduate studies and the technical subject matter of a professional school ought to be dropped.

The answer to Question 1 is clear. The evidence in this study and elsewhere[2] indicates that colleges, dedicated by their own affirmation to offering an undergraduate liberal education, often include in their programs courses which ought to be reserved for graduate or professional schools. Even if the mission of a liberal arts college made this practice educationally defensible, the cost of most such instruction would be prohibitive. The practice of offering excessive instruction in specialized branches of knowledge has fragmentized the curriculum. Concurrently it is undermining the economy of these institutions. Dropping a significant proportion of the instruction now offered in some liberal arts colleges, and some courses in all of them, would result in a unification of purpose and more effective use of their limited financial resources.

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[1] The Bulletin of Southwestern at Memphis, 1957-58, p. 24.

[2] Earl J. McGrath and Charles H. Russell, Are Liberal Arts Colleges Becoming Professional Schools? (New York: Bureau of Publications, Teachers College, Columbia University, 1958).

In answering Question 2 the significant fact is that all the colleges in this study, even those with limited curricular offerings, are old, reputable, and fully-accredited institutions. In all fields, leading graduate schools accept their students. Hence a great variety of instruction, especially in the advanced stages of a subject, would appear to be dictated neither by the proper purposes of undergraduate liberal education nor by basic preparation for graduate study. If this is actually the case, the facts showing wide divergencies in the amount of instruction offered by similar departments raise arresting questions concerning the excessive instruction offered by some.

There seems to be a difference of opinion about the answer to Question 3. Many of the heads of small-offering departments believe that the excessive multiplication of courses characteristic of some institutions actually weakens the student's preparation in his own field as well as narrowing his undergraduate education generally. Some of the quotations cited, as well as other statements received, were quite explicit on this point. On the other hand, some see no damage in a great variety of instruction if the students' choices are kept within proper bounds. The basic question here really is, Is the additional instruction necessary to achieve the purposes of a liberal education? On this point the fact that highly reputable liberal arts colleges manage with a minimum offering in many departments seems to give a decisive answer.

Question 4, Cannot alternative devices be found to solve the problem of faculty recruitment and retention? deserves the most thoughtful consideration of all administrators in liberal arts colleges, from presidents to department heads.

Alternative solutions to the problem of getting and holding a qualified group of teachers merit intensive exploration. The practice of inflating the liberal arts curriculum with specialized courses merely to attract and retain faculty members involves ethical as well as educational considerations. Instruction in an undergraduate liberal arts college ought to be justified only on grounds of its contribution to the liberal education of youth; not in terms of the specialized intellectual interests or the research ambitions of faculty members.

Students pay tuition fees on the assumption that the funds will be used to give them an education; philanthropists, unless otherwise specified, presumably give their money to the same end. Neither of these groups intends or wishes to subsidize the professional advancement of faculty members up the academic ladder. Formulating recruitment policies around the desires of faculty members to teach the esoteric, and for undergraduates often the wearisome, subjects related to the specialized interests of the teacher's graduate years is a practice of questionable ethics. It transforms colleges from institutions which society has established to prepare young people to live intelligently in a complex world into agencies which cater to the peculiar intellectual interests and personal and professional ambitions of teachers. In most colleges student fees cover a large percentage of the salary budget, sometimes all of the teachers' salaries.[3] The net result of these recruiting practices, and the related policies governing promotions and raises, is to use a significant portion of student funds for purposes which, according to the testimony of many of those interviewed in this study, suggests do *not* advance the student's liberal education, do *not* prepare him better for graduate study, but do weaken the financial foundation of the institution.

Only a restoration of undergraduate teaching to its deserved position of respect and dignity in the whole enterprise of higher education can correct some of the twisted and prodigal curriculum practices now existing in some liberal arts colleges. As long as the ability to offer specialized instruction related to research and publication in a narrow field of knowledge continues to be the primary consideration in advancement in rank and salary, ambitious undergraduate teachers will demand the right to teach courses related to their particular intellectual competence. Under the circumstances, colleges will be required to offer such courses regardless of their germaneness to the purposes of liberal education or their adverse effect on the institution's economy. To get and to hold faculty members these institutions now typically aspire to match the resources, and the facilities for specialized teaching and research, provided by the universities. In this competition they obviously come off second best, and in doing so they lose their most distinctive quality, a superior undergraduate liberal education. One of the armchair "truths" of academic life which urgently needs validation by objective study establishes a close relationship between "good" teaching, specialized intellectual interests, and research activity. Even without controlled studies, however, it is obvious to any dean who has kept a record of the scholarly production of faculty members and student evaluation of teaching ability that this proposition needs substantial qualification. Even if it were true that all who are preoccupied with specialized knowledge in the upper reaches of a subject are good teachers, it does not logically follow that all who are good teachers are preoccupied with specialized knowledge.

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[3] See Committee on the Economic Status of the Profession, "Instructional Salaries in 39 Selected Colleges and Universities for the Academic Year 1959-60," *AAUP Bulletin*, Vol. 46, No. 1, 1960, p. 47.

Faculty members themselves ought to take the initiative in bringing the college curriculum back within the scope and meaning of liberal education, for quite aside from considerations of the institutions' educational and moral integrity, their own economic welfare, if they are going to spend their lives in teaching undergraduates, is indissolubly connected with the success of efforts to restore the liberal arts college to its deserved status in American culture.

Summary

The material presented thus far discloses wide variations in the comprehensiveness of college curricula and in the amountof instruction offered in comparable departments. Comparisons of the number of credit hours of different courses scheduled in the fourteen colleges studied reveal the magnitude of differences in their total offerings. During the two academic years 1957-58 and 1958-59, for example, two colleges, each with 19 major departments and almost identical enrollments, offered 735 and 1349 credit hours of instruction respectively, a difference of 83.5 per cent.

Over the two-year period, differences in the number of credit hours taught in similar departments amounted to 40 or more in three cases, with an extreme in English of 69 credit hours. In the school with the larger range of instruction, of 19 departments 14 scheduled 40 per cent more credit hours than they themselves required for a major, and in three departments the excess amounted to between 300 and 400 per cent.

Colleges which offer a considerable variety of instruction tend to have a low average class size, a relatively small percentage of large classes, and a comparatively high ratio of classes with few (under 11) students. The student-faculty ratio and average class size are important determinants of instructional cost. Since a relatively large total number of credit hours of instruction offered plays a role in lowering the student-faculty ratio and the average class size, no institution striving to raise salaries can afford to ignore the increased cost resulting from course proliferation.

Many deans and department heads justify courses with small enrollments on two grounds: (1) they are essential elements in a complete and proper undergraduate liberal education; (2) they are required to attract and retain qualified teachers. The small offerings in some of the departments investigated in this study, and the opinions of their chairmen, raise serious questions concerning the validity of both of these propositions. The modest curricular fare in some reputable colleges suggests that others could inaugurate an abstemious diet without emaciating the liberal education of their students. Indeed such an exercise in self-discipline would improve the well-being of these academic organizations by restoring purpose and coherence to liberal education. In any effort to get and to hold teachers of quality, higher salaries and a lighter teaching load resulting from a reduction in offerings would be more effective than the present dispersion of teaching energy through many specialized courses and the attendant low salaries. In the competition for faculty members the policy of providing opportunities to do research and advanced specialized teaching in lieu of appropriate undergraduate instruction will increasingly prove self-defeating to the liberal arts college.

Though individual colleges differ from others in curricular patterns, and should continue to do so, many could unquestionably pare down their present programs without loss, and in all probability with some gains in total effectiveness. The competitive importance of higher salaries and the urgent need for additional resources to meet the cost of accommodating larger enrollments dictate a more efficient use of the teaching resources of liberal arts colleges. Successful efforts to these ends will place these institutions on a sounder financial footing and enhance their contribution to the higher education of American youth.

CHAPTER III

COSTS OF INSTRUCTION

Since the unit cost of instruction bears a close relationship to the total expense of operating an educational institution, this study had as a primary objective the determination of the relationship existing between the number of different courses offered by a college and its instructional costs. If providing a rich variety of subjects in the various departments raises the student credit-hour cost, then one device which colleges could use to improve their financial condition would be to reduce their offerings to the minimum consistent with the purposes of a liberal education.

One accepted index of instructional costs is obtained by dividing total expenditures for full-time faculty salaries by the aggregate number of student credit hours of instruction given. The resulting figures do not completely represent teaching costs, because they omit such items as the expenses of operating libraries and laboratories, and other expenses indirectly related to the activities of the classroom. The resources available for this study did not permit a more inclusive analysis. Since this inquiry is concerned primarily with the kinds and amounts of subject matter in the curriculum and their financial consequences, the neglect of the other costs of instruction is less a shortcoming than it would be in an analysis of the total operating expenses of a college.

The significance of the per credit-hour cost of instruction becomes fully apparent only when the aggregate number of hours offered by a college during a single academic year is known. The total student credit hours taught in 1958-59 in these colleges varied from 17,000 to 49,000. If, therefore, the average cost per hour fails by only $2, the budget would shrink by from $34,000 to

$98,000. Distributed in faculty salaries these substantial funds would enable an institution to compete more successfully for faculty members.

Table IV presents essential information on the basis of which inferences can be drawn concerning various factors influencing instructional costs. Table V supplements these data by showing correlations between the cost of instruction and a number of other institutional characteristics.

An examination of the figures in Table IV, Columns B, C, and D, reveals very high relationships between average cost per student credit hour and (1) average salary per faculty member (r = .91), and (2) average student credit hours taught per faculty member (r = -.96). It is natural that as salaries increase, the cost of instruction should rise. Likewise, as student credit hours taught increase, the cost of instruction would fall. The practical significance of these facts, however, is that if average student credit hours taught per faculty member, or faculty yield, were increased, salaries could be raised while the average cost of instruction remained the same or might even be less. For example, at College 10, if faculty yield were increased from 385 to 485, salaries could be raised from an average of $5,906.56 to $6,500, while instructional costs were dropping from $15.37 to $13.40 per credit hour, and this desirable result could be achieved without adding to the teachers' weekly hours in the classroom.

The two factors which determine faculty yield are average class size and average teaching load. The correlation between faculty yield and average class size is high, r = .85, and that between faculty yield and faculty load is low, r = .27. The correlation between average class size and average faculty teaching load is negative, r = -.28. Within limits these figures can be interpreted to mean that institutions with comparatively small average class size had comparatively large average teaching loads. To a degree, therefore, the faculty pays the bill for small classes by working more hours per week.

If the faculty load does not greatly influence the size of the faculty yield in these institutions and the average class size does, an analysis of the factors which cause class size to rise and fall should be profitable. Obviously the number of different-sized classes in an institution determine the average class size. Accordingly, if salaries are disregarded, the percentage of small (under 11 students) and large (over 25 students) classes in the curriculum is the factor which most strongly affects average class size and, through faculty yield, the average cost per student credit hour.

Two other factors involved in correlations in Table V also affect the average cost per student credit hour. These are (1) the total enrollment which is negatively related (r = -.49), and (2) the credit hours offered over the two-year period positively related (r = .30). Though the correlation of .30 between cost of instruction and the total credit hours is not very high, it is high enough to necessitate attention by any institution attempting to lower instructional costs. The fact that this correlation rises to .50 when enrollment is held constant gives even stronger evidence that a large offering results in high costs. Certainly colleges with small total enrollments should not offer many advanced courses in the several departments because the small number of junior and senior students spread over many majors inevitably means larger unit costs.

The foregoing facts suggest the following generalizations concerning the relationships between the factors in Table V and instructional cost. First, a small total enrollment makes for a high average cost of instruction (r = -.49). This factor becomes much more significant when the salary is held constant, for the correlation rises to -.61. As stated, this relationship is explained in part by the fact that colleges with small enrollments find it difficult to schedule advanced instruction in the various majors for more than a few students. In institutions with only 600 to 800 students and 18 or 20 departments the normal loss of students from the first two to the last two years of college results in such a scattering of majors that the average class size in these upper years must inevitably be small. In some instances the ratio of small classes (under 11 students) to total classes for the four years rose as high as two out of five. The ratios for all institutions would have been much higher had only the classes taken by juniors and seniors been considered.

Secondly, a relatively high percentage of classes with over 25 students, other things being equal, markedly reduces the cost of teaching. This is especially true in colleges which have a common general education program for all students, and consequently relatively large classes, 25 to 30, or large lecture sections, several hundred students. At College 11, for example, which ranks lowest in percentage of classes with fewer than 11 students and fourth from the top in classes over 25, freshmen and sophomores pursue a common general education program in large groups.

Thirdly, though high salaries usually result in high costs of teaching, some institutions with almost identical average salaries operate much more economically than others. By keeping the number of classes under 11 down and the number over 25 up, and the total range of offerings at a modest level (as in the case of College 8), a high salary will not result in a high unit cost. Stated another way, a low unit cost for teaching does not necessarily mean low salaries.

If, therefore, an institution wishes to improve its financial position, it can do so by raising its enrollment to some such figure as 1200 or 1500 students, while keeping the advanced courses with few students near the number required for a major, and by developing a general education program with quite large classes. Specialized vocational curricula which in many instances attract few upper-class students could also be eliminated for reasons of economy and because of their incompatibility with the proper purposes of a liberal

TABLE IV

COMPARATIVE FIGURES FOR 13 COLLEGES OF LIBERAL ARTS CONCERNING VARIOUS FACTORS RELATED TO THE COST OF INSTRUCTION*

	A	B	C	D	E	F	G	H	I
Code Number	Enrollment	Average Cost Per Student Credit Hour	Average Salary Per Faculty Member	Average Student Credit Hours Taught Per Faculty Member	Credit Hours	Per Cent of Classes Under 11	Per Cent of Classes Over 25	Average Faculty Teaching Load	Average Class Size
6	1,155	$7.86	$4,809.58	611	1.778.5	22.00	38.24	25.9	23.00
13	1,164	9.04	4,960.61	549	1,837.5	21.70	31.43	25.5	21.75
7	785	9.39	5,184.09	556	1,278.5	21.43	39.21	23.1	23.63
11	1,591	10.49	5,683.28	541	1,952.0	17.44	29.67	25.9	20.98
8	1,145	12.80	6,010.30	468	1,539.5	28.38	26.95	23.9	19.40
9	1,015	13.77	5,673.36	415	2,131.5	35.04	19.49	23.9	16.81
5	844	14.25	5,853.45	425	2,039.0	39.64	17.79	27.1	15.19
3	1,228	14.28	6,176.99	433	1,909.5	24.66	26.73	21.7	19.49
1	1,025	14.44	5,723.71	398	1,907.0	29.64	23.10	23.0	18.44
10	910	15.37	5,906.56	385	1,469.0	27.48	22.03	20.6	18.63
2	734	15.80	5,953.30	382	1,806.0	42.42	16.87	25.4	14.97
14	620	16.34	6,435.98	405	1,772.0	44.11	13.92	29.0	14.70
4	938	17.79	6,989.98	396	2,055.0	33.89	23.61	22.1	17.71

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*College 12 does not appear in the tables involving financial data because salary figures were not available for this study. For the reasons given in connection with Table I, data on programs in music and art that included a large number of performance and studio courses were omitted.

The figures in columns A, B, C, and D are for 1958-59, while those in columns E, F, G, H, and I are for 1957-58 and 1958-59. The use of figures for the two different periods does not affect the relationships between the columns, because the ranks of the colleges would not have changed substantially if all the data had been for one year.

Column E lists the total number of credit hours for courses offered in 1957-58 and 1958-59. These figures are higher than those in Table I, Column 3, because the credit hours for courses offered in 1957-58 were counted again if they appeared in 1958-59. In Table I, credits for courses in 1958-59 were counted only if they had not been offered in 1957-58.

TABLE V

CORRELATIONS

BETWEEN AVERAGE COST PER STUDENT CREDIT HOUR AND:	r
Average Salary per Faculty Member (1958-59)	.91
Average Student Credit Hours Taught per Faculty Member (1958-59)	-.96
Size of Enrollment (1958-59)	-.49
Size of Enrollment (1958-59) Holding Salary Constant	-.61
Credit Hours (for Two Years)	.30
Credit Hours (for Two Years) Holding Enrollment Constant	.50
Per Cent of Classes under 11 (for Two Years)	.76
Per Cent of Classes over 25 (for Two Years)	-.84
Average Class Size (for Two Years)	-.84
BETWEEN AVERAGE STUDENT CREDIT HOURS TAUGHT PER FACULTY MEMBER (TWO YEARS) AND:	
Average Class Size (Two Years)	.85
Average Faculty Teaching Load (Two Years)	.27
BETWEEN AVERAGE CLASS SIZE (TWO YEARS) AND:	
Average Faculty Teaching Load (Two Years)	-.28

arts college.

It should be pointed out further that even those institutions with relatively high salaries in terms of liberal arts standards, for example College 14, could operate with greater financial efficiency. This college, which has the second highest average salary, also has a high unit cost of instruction, second in the group. But it also has the largest percentage of classes with fewer than 11 students, and the smallest percentage with over 25. If the small classes were reduced and the large classes increased, the cost of instruction would fall markedly. If the enrollment, which is the smallest of all the 13 institutions, were also permitted to rise by several hundred while the class sizes were enlarged by the addition of more upperclassmen in the advanced courses, further financial savings could be accomplished. The resulting additional income from student fees would make possible a considerable increase in salaries and thus place this college in a position to compete successfully for topflight staff members even with the larger universities.

These proposed actions cannot be viewed solely in financial terms. They obviously involve basic educational considerations. Some institutions place great value on the intimate relationships and the individualized instruction which a small student community makes possible. There is much to be said for this point of view. The slight influence which, according to a number of studies, institutions of higher education have on the values of college students can doubtless be attributed in part to a lack of personal contact between teachers and students.

No one knows how small a college would have to be to guarantee educationally desirable close personal relationships in class and on campus. Visits to the colleges in this study suggested, however, that individual treatment and a closely knit social life were as strong among some of the colleges with 1,000 or 1,100 students, for example institutions 1, 6, 8, and 9, as in colleges 2, 7 and 14 with considerably smaller enrollments. Personal concern for the student as an individual seems to be a result of the attitude of the teacher toward his professional responsibilities in a liberal arts college rather than an automatic concomitant of class size or, within limits, of total enrollment. If instructors lecture, regardless of class size, emphasize the purveying of information rather than the cultivation of general traits of intellectual competence, and concern themselves excessively with their own research activities and writing, they are likely to give little individual attention to the intellectual and emotional development of students, regardless of the size of their classes or of the academic community as a whole.

A comprehensive review of the research on class size leads any objective observer to the conclusion that the burden of proof of the distinctive value of small classes rests on their protagonists. A host of studies show no significant differences between the intellectual effectiveness of instruction in small and in large classes. Some years ago Hudelson conducted studies on this subject. His findings showed little relationship between the size of the class and the accomplishment of students. In his review of previous investigations of class size he said:

> Any exhaustive study of the relation of class size to educational efficiency must involve, in addition to class size proper, a consideration of such factors as the aims of education, the intelligence of the students, the ability of the teacher, the physical facilities of the classroom, the nature of the subject matter, the size of the classes to which pupils have been accustomed, the efforts made by the teachers to adapt instruction to the size of the class, and the reliability of the means employed for measuring teaching ability and student accomplishment. No such exhaustive study of class size has yet been made.[1]

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[1] Earl Hudelson, Class Size at the College Level (Minneapolis: The University of Minnesota Press, 1928), p. 13.

His conclusions stated that his studies dealt with very few of the many issues involved in a consideration of class size. He advocated continued and extensive research to settle the question. The Encyclopedia of Educational Research more recently expressed the thought that no definite conclusion has yet been reached on the subject.[2]

Researches on class size usually study accomplishments in groups ranging from ten or fifteen students to a hundred or more. Insofar as these liberal arts colleges are concerned, research is needed on the differences between classes of five or six students and others of fifteen or twenty. The correlation in Table V of +.76 between the unit cost of instruction and the number of classes under eleven suggests that these small classes require more reliable justification than is now available if colleges are to incur the exorbitant cost of such instruction. No one has yet proved that classes of five have distinct educational advantages over those of fifteen students. Common sense suggests that with the possible exception of such subjects as foreign languages and the fine arts, the smaller figures are not educationally defensible. If this is so, it follows, a fortiori, that they are fiscally inexcusable. A California Committee which had made a thorough study of that state's needs and resources in higher education had this to say about the relationship of small classes to cost:

> While no arbitrary standards can be set for class size, it is apparent that all institutions have numerous classes with fewer than ten students, and a considerably larger number with fewer than twenty. It would be desirable for each institution to review each of the classes or courses to see whether the number could not be considerably reduced in the interest of economy and use of faculty time. Very small classes, particularly at the undergraduate level, should be "suspect" until justified.

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[2] Ruth E. Eckert, "Colleges and Universities--Programs," Encyclopedia of Educational Research, 3rd ed. (New York: The Macmillan Company, 1960), p. 279.

> Smaller classes usually mean lighter student-credit-hour teaching loads and lighter pupil station utilization in classrooms. Both results make an appreciable difference in teaching costs and capital outlay.[3]

Tutorial, honors, and other forms of individualized instruction constitute a special case in any discussion of class size. These arrangements generally bring a faculty member and a student together for an hour every week or two to review a personal research project, discuss special reading assignments, or critically analyze a prepared paper. Over half of the colleges in this study have some form of individualized instruction in at least some departments.

Interviews with deans and departmental chairmen produced different opinions concerning the value of tutorial and honors programs. Some believed that under ideal circumstances these types of teaching, especially when limited to the abler students, were superior to any other. Others, however, observed that individualized instruction makes inordinate demands on faculty time and energy. Since students in independent study, reading, and special problems courses normally treat individually selected topics, faculty members must prepare themselves for conferences with students working on quite diverse subjects. In some of the colleges a faculty member spends an hour every week or two in individual conference with tutorial or honors students. Those who prepare themselves adequately for these sessions state that they spend considerable time in reviewing the literature on particular topics and in other preparatory activities. Some observed that more time is often involved in preparation for a meeting with a single tutorial student than for a three-hour course, especially if they have taught it before.

Conversations with tutors revealed several points of view which merit careful consideration by institutions contemplating the inauguration of a costly program of individualized instruction. Though convinced that tutorial instruction has merit in the abstract, some teachers observe that (1) such teaching should be strictly limited to students who have both high intelligence and the initiative to educate themselves. (2) Properly conducted, three tutorial conferences demand as much of the instructor's time and energy as a three-hours-a-week class assignment. (3) Accordingly, in computing teaching loads the administration should give full credit, hour-for-hour, to those giving individualized instruction.

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[3] Committee on the Conduct of the Study of Higher Education in California, A Restudy of the Needs of California in Higher Education (Sacramento: California State Department of Education, 1955), p. 450.

On the other hand, some tutors have been disillusioned on all three of the foregoing matters. They find that with many students tutorial instruction is an uneconomical teaching procedure. Considering the time they have to give to it, it is excessively costly, and their teaching load has not generally been reduced below that of their colleagues who have no tutorial or honors students.

The most prevalent justification for the inordinate expenditure of energy and time in a tutorial program on the part of both teacher and student is that students should have the matchless experience of engaging in at least the elementary "research" activities of the scientist or the "creative" work of the scholar. In this connection they ought to consider the opinion of one of America's finest intellects, once a very successful teacher of undergraduates in a college of high standards. In an article dealing with research and creative intellectual activities, Jacques Barzun has expressed doubts about the educational value of college honors programs. Of these efforts he says:

> ...In the undergraduate college, which cannot afford to have anything but active, full-time teachers, the devouring ideal [research] reappears in the form of the Honors program, which requires juniors and seniors to "do research" in the form of an "important paper" or a "senior thesis." Those who take and those who teach this part of the curriculum are esteemed the happy few. To prepare or supervise a dubious imitation of scholarship is considered "real work," whereas to teach or learn the fundamentals of great subjects is accounted an

inferior task.[4]

In none of the 14 colleges has an objective means been devised for evaluating the teaching burden imposed by individualized instruction. In view of its great financial cost, but more particularly the dissipation of faculty time, colleges contemplating such a plan under the spur of the recent concern for excellence in education with more attention to the superior student ought to benefit from the knowledge gained by their sister institutions. In an assessment of the experiences of other institutions with the problem of the growth of the number of small classes in the curriculum, the reflections of one of the authors of the Amherst report seem of particular relevance. He says:

> ...We were...surprised to discover that a very large fraction, about a quarter of the teaching time, was used in about 2 per cent of the student time, because we have so many classes of five or less.[5]

If, however, some faculties believe that individualized instruction in its varied forms has unique worth, its patent high cost ought to be offset by other class instruction organized in large enough units (from fifty to several hundred students) to offset the large expense of personalized teaching. This would be quite a different curriculum organization from the most common today, in which first- and second-year courses with enrollments of 20 to 40 students are followed by a majority of upper-class courses with enrollments ranging from 2 to 15. The evidence in this study indicates that this type of excessively expensive undergraduate curriculum is often characterized by an educationally indefensible proliferation of advanced specialized courses. The results generally are heavy teaching loads and low salaries, which put the institution at a serious competitive disadvantage in the search for suitable teachers. The evidence in Table IV suggests that all colleges could profitably re-examine their programs with regard to the various factors in this table relating to the efficiency of institutional management.

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[4] Jacques Barzun, "The Cults of 'Research' and 'Creativity'." Harper's Magazine, October 1960, p. 71.

[5] Willard L. Thorp, "Some Problems at Amherst," Higher Education in the United States, Seymour E. Harris, editor (Cambridge: Harvard University Press, 1960), p. 161.

CHAPTER IV

A HYPOTHETICAL COLLEGE

It has been shown that some departments in all the colleges studied offered a narrow range of courses, in some only a few more than the number required for a major. Others, to the contrary, furnished three times or more the requisite number. As these facts emerged they suggested the possibility of assembling a composite of selected departments with relatively few courses regardless of their institutional affiliation. Thus a picture could be created of a hypothetical college with creditable academic standards but modest offerings. It would show that a college single-mindedly dedicated to the purpose of providing a sound liberal education could reduce its total program to about 70 per cent of the average offerings in the colleges studied. If such a reduction were made while the enrollment remained constant, fewer classes would be needed, and class size would correspondingly increase. The college could then lower its teaching loads or, as events permitted, reduce the number of faculty members. Faculty salaries could then be substantially raised. If student enrollments were permitted to increase and the average class size increased commensurately, the additional income from student fees could be used to increase faculty salaries still further, providing new courses were not added.

It would be unreasonable to assume that such a hypothetical college could quickly, or perhaps ever, be created. The character and the quantity of instruction scheduled by departments vary with the type of teachers involved, the initiative of the head, benefactions for specialized courses, the needs of a region, and other educational and social conditions. Yet the prospect of an ideal curriculum has merit in setting goals for administrative officers who have primary responsibility for securing the resources to provide the best possible instruction for the young people who choose to attend the institution. The facts in this study clearly indicate that these resources are not uniformly put to the most effective use. Some institutions of quality have obviously been able to provide an accredited liberal education at far less expense than others. As shown earlier, heads of departments with modest programs almost without exception approved their limited offerings, and contended that their students had no trouble in meeting the standards of graduate or professional schools to which they transferred. This ideal college could, therefore, provide an acceptable undergraduate program of liberal education as well as suitable preparation for advanced study.

Even if no institution could arrange its offerings in accordance with the departments constituting the composite college, the latter does provide an objective toward which to work. Moreover, this institution is only a fiction in the sense of being a synthesis of existing educational units. The material out of which this imaginary college was created exist in the institutions participating in this study, all of which are fully accredited independent liberal arts colleges. The departments assembled to make the composite institution were selected in accordance with certain criteria.

1. The number of credit hours of instruction, representing the totals for different courses actually taught during the two-year period 1957-59, in each instance fell well below the average offered in that particular subject in the colleges as a group. The departments do not in all cases represent those which offered absolutely the lowest number of credits. It would have been possible in some subjects to select departments with even fewer hours of instruction, but several factors made this undesirable. For example, the number of faculty members in the various departments and their degrees and rank were taken into consideration. If the staff seemed to be below average in preparation or number,

the department, even if it had the lowest offering, was excluded on the ground that it could not fairly exemplify a desirable unit in a liberal arts college. All but two of the departments included in the model had more than one faculty member.*

2. The ranks and degrees held by the members of the constituent departments were typical of the other colleges. With one exception, none of the departments selected was staffed exclusively by persons holding degrees below the Ph.D. or a rank below associate professor.

3. Although the number varied widely, all the departments chosen had some student majors during the two academic years 1957-59. Some departments, such as classical and modern languages, had relatively few majors; some others, especially in the social sciences, had 20 or more.

In choosing the departments no consideration was given to the average cost of instruction because this was one of the resulting factors to be studied. For the same reason the list was compiled with little regard to salaries or credit-hour yield per faculty member. Every effort was made, however, not to select departments in institutions with low average salaries since this would automatically have lowered the cost of instruction. Indeed ten of the twenty low-offering departments are in the four institutions with the highest average salaries.

In interpreting the data to be presented it should be borne in mind that though as an organic whole this is a synthetic institution, its components are taken from existing and not imaginary departments. The figures on total credit hours per department, average salary, and costs per credit hour represent the actual situation in the various colleges involved. Hence any institution which wished to make the range of its instruction correspond to the figures in the hypothetical college could feel secure in the knowledge that other fully accredited institutions had already done so without ill effects.

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*In one of the exceptions, the faculty member held the rank of professor; in the other of assistant professor. Both had full-time appointments and carried a regular full-time teaching load.

The Composite Minimum Curriculum

Tables VI and VII, which show the departmental offerings in the hypothetical college and provide comparisons with the institutions studied, reveal the following significant facts:

1. The low figures for departmental offerings range from 24.5 hours in Spanish to 62 hours in English (including general education), with a median of 37.75. Perhaps the most arresting fact in Table VI concerns the concentration of minimal offerings in College 8. No less than 6 of these 20 departments are in this institution, which has the fourth highest average salary and the fifth lowest cost per student credit hour. College 8 also stands third lowest in the number of credit hours of instruction offered, and sixth highest in the average size of classes, 19.4.

2. Table VII reveals another significant comparison between the total offerings in the thirteen colleges and in the hypothetical institution. The average number of different credit hours of instruction actually taught for the entire group, omitting the institution which submitted no financial data, was 1,095.8, with a range of 773.5 to 1387. The total in the hypothetical institution, 763.5, falls below the 773.5 hours in the college lowest in the list.

3. Only one department in the hypothetical college offers more than 40 per cent of credit hours of instruction beyond the number needed for a major (assuming the latter to be 28 hours), whereas the majority of the departments in the 13 colleges surpassed 40 per cent.

TABLE VI

A COMPOSITE PROGRAM OF MINIMAL OFFERINGS

Department	Credit Hours of Instruction Offered by Department	Credit Hours in General Education
Biology	43.5	6
Business Administration	33	
Chemistry	38	
Classics	42	
Economics	41	
Education	38	
English	56	6
French	27	
Geology	37.5	
German	31	
History	42	6
Mathematics	39	
Philosophy	30	
Physics	37.5	6
Political Science	40	6
Psychology	33	
Religion or Bible	30	
Sociology	34	
Spanish	24.5	
Speech	30.5	6
TOTAL	727.5	36
GRAND TOTAL	763.5	

TABLE VII

COMPARISON OF TOTAL CREDIT HOURS AND COST FACTORS IN A MINIMUM PROGRAM AND 13 LIBERAL ARTS COLLEGES

Institutional Factors	Hypothetical College	13 Colleges*
Credit Hours	763.5	1,095.8
Full-time Faculty	47.28	64.5
Credit Hours Yielded	23,981	29,436
Salary	$296,851.60	$377,241.53
Cost per Student Credit Hour	$12.38	$13.20
Average Salary per Faculty Member	$6,278.59	$5,848.71
Per Cent of Classes below 11 Students	31.44	29.83

*The figures represent the average (mean) in each category for the 13 colleges which supplied data on salaries.

The figures for Credit Hours result from the use of the same system as that in Table I, where the credit hours for courses offered in 1958-59 were added to the total only if they had not been offered in 1957-58.

4. The average cost of $12.38 per credit hour in the projected college is $0.82 lower than the $13.20 for the average of the entire group. The significance of this figure ($0.82) becomes apparent when it is multiplied by the number of credit hours of instruction offered, which varied from 17,000 to 49,000.

5. The average faculty salary of $6,278.59 is some $430 higher than the average of $5,848.71 for the 13 colleges. The average of the salary budget for the 13 colleges exceeds the total for the hypothetical college by $80,000. This sum added to the salaries of the typical staff would mean an increase in most of well over $1,000 each, and in some much more.

6. The imaginary college has 17.22 fewer full-time faculty members than the average number in the colleges as a whole, while the total credit hours yielded by the former falls 5,455 below the latter. If total credit hours yielded is divided by total faculty, the imaginary college has an average faculty yield of 507, while the 13 colleges have 457. It follows that the faculty members in the projected college would teach more students per class, but they would not necessarily teach more hours per week.

7. This latter point is borne out by the percentage of classes enrolling 10 students or less, 31.44, a figure somewhat greater than the average of 29.83 for the 13 colleges. The higher percentage of small classes and the lower cost per student credit hour suggest that the proposed institution has more classes over 25 than the average for the 13 colleges. It is interesting to note that the enrollment at the hypothetical college (799) falls roughly 200 below the average for the 13 schools (1012). This figure was derived by dividing 30, the average student credit-hour load for the year, into 23,981, the total credit hours yielded. If enrollments were increased in the projected college without materially increasing departmental offerings or faculty members, salaries would

be even higher than the $6278.59 in item number 5, Table VII.

The foregoing comparisons strongly suggest that all the colleges in this study have (and since these are representative of other independent liberal arts colleges the same conclusions would doubtless apply universally) some departments which provide a richer and a more costly variety of instruction than accredited undergraduate liberal education requires. The reasons why these institutions typically schedule excessive instruction are many. They vary from institution to institution, and they are often deeply rooted in vested personal and departmental interests.

No institution, however eager the administration and faculty might be to operate more economically, could at once effect all the necessary changes in their programs. All could move in this direction, however, year by year by increasing enrollments, by not replacing teachers of certain subjects as faculty members leave or retire, and by selecting students more discriminatingly in terms of the institution's program. None of these desirable steps is likely to be taken without a redefinition of the purposes of a liberal arts college and an adjustment of departmental offerings to these purposes. Not until every course in the curriculum is weighted in the balance of relevance to undergraduate liberal education can the present widespread overexpansion of the curriculum be corrected.

CHAPTER V

ATTITUDES AND ROLES OF PRESIDENTS, DEANS, AND DEPARTMENT HEADS

The methods presently employed to alter the curriculum, especially to eliminate courses no longer needed or appropriate are no less important than the structure of the curriculum itself. For if no suitable machinery exists to accomplish such changes, they will be haphazard or not accomplished at all. Hence this inquiry also attempted through interviews with key figures in these colleges to obtain opinions on certain matters related to established committees or other agencies charged with these responsibilities. In these conversations the president and the dean were selected as representative of the central administration, and the department heads, of the faculty. Though department heads do not in all instances express the views of those of lower rank, their dominant position gives them decisive power over policies of the kind under consideration.

The information produced by interviews among these three groups -- the presidents, the deans, and the department heads -- does not lend itself to precise statistical analysis, but the three staff members of the Institute of Higher Education who talked with the persons concerned compared their experiences and found considerable agreement in their judgments. They believe, therefore, that the following observations concerning the forces which influence curricular change and the mechanics by which they are accomplished within these institutions have considerable validity and reliability. They also believe that these generalizations would have wide applicability among other colleges of liberal arts.

The Presidents

In personal conversation the presidents of all but two of the colleges were questioned about matters related to the range of curricular offerings in their respective institutions. When asked specifically about the relatively large number of small classes of advanced subject matter scheduled by some departments, the presidents generally expressed the conviction that there were too many such courses, and that they unnecessarily dissipated the institution's limited financial resources. Many, though not all, made a yearly analysis of the number of classes of various sizes offered by the several departments. Some planned in the near future to initiate steps calculated to increase average class size by eliminating courses which consistently attracted few students. Only three colleges had already taken action to this end.

Of the three groups of persons interviewed, the presidents exhibited the greatest desire to reduce the number of courses with few students and were most firmly convinced that, in the interest of institutional efficiency, if not solvency, substantial curtailment had to be made. Even those who believed that small classes represented one of the indispensably distinctive features of liberal arts colleges, and ought, therefore, where justified to be retained, nevertheless cited certain types of highly specialized courses with small enrollments which could be dropped without damage to, and probably with an enhancement of, the educational program. Several of the presidents had considered means, discussed later, to effect a judicious pruning of the curriculum.

A few of the presidents reprehended the attitude of faculty members toward any administrative suggestion that the instruction in their own subject matter, even when it involved many small classes, be contracted. These administrators expressed dissatisfaction with the faculty's unwillingness or inability as an organized body, or through its representative committees, periodically to analyze and revise the institution's elaborate offerings. Several presidents testified that by various devices, open or hidden, the faculty had obstructed efforts at curriculum revision, and in some instances, documented their statements by naming particularly recalcitrant individual department heads. The presidents' views on this matter can be generalized in the statement that without exception they recognize that excessive proliferation of courses causes the institution to operate less economically than it could and should.

With two or three exceptions, however, the heads of these institutions presented no systematic plan for reviewing the curriculum with the purpose of keeping it within the defensible limits set by the standards of a sound undergraduate liberal education. This situation exhibits the present ambiguity about the role of administrative leadership and responsibility in the determination of educational policy and practice. It suggests the need for a clarification of the appropriate spheres of activity of faculty and administration in dealing with urgently important issues of institutional life in these colleges and elsewhere in our institutions of higher education.

The Deans

The deans, directly charged with general supervision of the curriculum and with the assignment of teaching responsibilities, matched the presidents in their awareness of the problem of needless proliferation of courses and the consequent increase in the cost of instruction. They differed from the presidents, however, in their appraisal of the seriousness of the situation and consequently of the need for action. Though some had given considerable thought to curriculum revision and one or two had actually established administrative procedures for assessing the need for and the restructuring of departmental offerings, most deans were more concerned with the richness of their offerings compared with those of other institutions.

Hence the deans as a group gave more attention to the types of instruction which ought to be offered than to those which ought to be eliminated. One president testified that the dean had actually hindered his efforts to reduce the number of specialized courses which continually attracted few students. No effort was made to investigate the merits of either position, but the case illustrates differences between the views of presidents and deans on this important aspect of institutional life. It also suggests the validity of the foregoing proposal that administrative and faculty responsibility for curriculum control requires clarification.

Nevertheless, the deans were more ready than faculty members, as represented by department heads, to admit the need for a reduction in curricular scope. In their views on this matter the deans stood midway between the president and the department heads. This situation is understandable. Generally the deans do not have the broad responsibility for institutional policy and financial management which rests on presidents. Through authority delegated by the president they do usually have responsibility to keep the teaching budget within defensible proportions and within the limits of the institution's funds. Under present practice they are, to a greater extent than department heads, more accountable for the student's whole education than for his mastery of a given field. Hence the deans should be more concerned with the educational strength of the entire institution than with the ambitions or status of a single department. The conclusion which may be drawn from the facts educed in the interviews with deans is that they are aware of the problem of excessive departmental offerings; they seem not to be so conscious of, or at least not so concerned about, the effect of this situation on the economic well-being of the institution as are the presidents, and to an extent they share departmental pride in the richness of the curriculum compared with that of other colleges of liberal arts.

The Department Heads

In the matter of eliminating small classes to improve economic efficiency the department head is typically the most conservative force in these liberal arts colleges. To be sure, examples have been cited to document the view that some department heads see the educational merit in, and the economic necessity for, keeping the range of instruction and the plurality of specialized offerings within moderate bounds. Apparently these unrepresentative heads feel secure in their present policies of stringently limiting the advanced courses which attract few students. The majority, however, appear to measure the status of their departments and their own personal fortunes in terms of the number of courses offered, the number of faculty members involved, and the compass of advanced specialized instruction provided, regardless of cost.

The attitudes of these latter departmental chairmen deserve examination in terms of general institutional policies and the mores of contemporary academic life. Two attitudes revealed in the interviews seem to lie at the basis of much of their resistance to any efforts to reduce the scope of their offerings. To enlist general faculty support in any effort to bring the curriculum within the established needs of undergraduate liberal arts students these points of view must be carefully analyzed and sympathetically considered.

First, few faculty members seem to recognize the close relationship between the number of small classes their respective departments offer and their salaries. The interviews revealed that department heads generally construct their programs with a keen awareness of both the prestige value of specialized instruction and the status conferred on the department by persons capable of doing such teaching. Too few consider seriously, if at all, the fact that each expansion in program, wherever it may occur in the institution, unless accompanied by a special grant or endowment, or unless it attracts students who would not otherwise attend the college, has the effect of dissipating funds that would otherwise be available for sustaining or increasing salaries. Overlooking the cost to themselves and their colleagues, department heads, in their vision of departmental grandeur, often try to offer advanced instruction more appropriate to a graduate or professional school. Thus their students, they believe, will as they continue their education, appear to be superior to the graduates of comparable undergraduate institutions.

Reputation and status are also pursued by providing instruction in a wide variety of subject-matter divisions within a discipline. As shown earlier, some departments deliberately offer advanced courses unnecessary and out of place in an undergraduate college to attract and retain outstanding staff members whose interests are narrowly specialized. While these various practices which determine the content of the curriculum can be defended on some grounds, they normally result in unnecessarily large staffs, a higher unit cost of instruction, and a thinner spread of the funds available for salaries. They also explain in part the heavy teaching loads in many of the smaller colleges. Every administrator who wishes to enlist the faculty, especially the department heads, in an effort to pare the curriculum down to essentials, has a responsibility to demonstrate the validity of his position by supplying detailed figures on the costs of various types and levels of instruction so that they will themselves see the relationship between curricular offerings and faculty financial well-being.

Second, even many faculty members who already perceive these educational and economic relationships view with considerable scepticism administrative efforts to improve economic efficiency through curriculum reform. In most colleges the faculty has observed that in recent years much additional income from student fees has been consumed by administrative costs, overhead, and the enlargement of plant and other facilities. Rightly or wrongly they see the savings which might result from the elimination of small classes, and a consequent increase in average class size, as money the administration will in large part use for purposes other than salary increases. As one person interviewed graphically remarked, A faculty member is inclined to think that every new tree planted on the campus has its roots in his pocketbook. The interviews showed that these impressions have caused many faculty members to view with little enthusiasm and sometimes with pronounced antagonism, projects to operate more economically, even those said to ensure larger salaries.

The interviews with department heads suggested that most of them are not blindly and intransigently opposed to the elimination of some types of instruction. In making such changes, however, these chairmen believe in moving slowly, especially when the changes involve a shrinkage of their departmental offerings, until the educational and financial merits are demonstrated. Significantly, only a very small minority of department heads contended that they could not eliminate any courses or enlarge the average size of classes. They are restrained from doing so, however, first by their failure to realize with sufficient clarity the necessity for such steps if their departments are to compete successfully for faculty members of high quality in the years ahead by offering considerably higher salaries than they now do, and second, by their scepticism that their efforts to economize will really result in personal financial benefits.

The more economical operation of the curriculum may, to be sure, call for stronger administrative action. But such action will at best cause a dragging of feet and at worst outright faculty revolt unless the two foregoing conditions of academic life are clearly recognized.

Policies and Agencies for Elimination of Classes

Another aspect of this inquiry concerned itself with an analysis of agencies established to make periodic reviews of the curriculum with the purpose of eliminating instruction no longer essential in the achievement of the institution's objectives. Information was sought on this subject on the assumption that in the absence of an established and accepted mechanism for this purpose any control of the expansion of the curriculum must necessarily be haphazard and usually ineffective. Moreover, the existence or nonexistence of such a device for periodically lopping off unessential courses, and for controlling the addition of new instructional units, will largely determine whether colleges can effectively attack the problems which it exposes.

An inquiry on each of the campuses revealed that although committees responsible for curriculum matters do usually exist, they concern themselves primarily with the addition of new courses and programs. With few exceptions they do not conduct periodic reviews of those already established to determine whether they have served their usefulness and should therefore be dropped. Nor do they normally question whether certain instruction should ever have been inaugurated by a liberal arts college.

Three institutions, however, have taken specific steps to re-examine the value, the propriety, and the feasibility of all their offerings. One college, Franklin and Marshall, with the help of an outside consulting firm, made a comprehensive analysis of its operations, including the course offerings of the several departments. As a result of this study a committee of faculty and administrators eliminated many courses listed in the catalogue. In 1959-60, when the study was completed, the catalogue contained 414 separate courses. In 1960-61 this number had been reduced to 335. This is the most dramatic and successful effort undertaken in these colleges to bring the curriculum within defensible compass. Other institutions may find helpful not only the survey of course eliminations in this college, but particularly the devices used to accomplish these results which were achieved almost without disturbance or dissatisfaction in the staff.

It is significant, however, that this activity was carried out by an ad hoc body as a special project directed by the president; it was not the work of a continuing agency such as a regularly appointed curriculum committee or an elected faculty council. The deep-seated practice of not having a standing committee to examine curricular offerings periodically is revealed by the fact that even after this major academic surgery had been completed, the college established no mechanism for the continuous control of pathological curricular growth. Those consulted only expressed the hope that somehow the process would go on.

At a second institution a special faculty committee headed by the dean reviewed all the courses listed in the catalogue with respect to their relevance to the institution's dominant purposes. This committee proposed a significant reduction in offerings, but no action had been taken when a member of the staff of this study visited the college. The outcome appeared doubtful. This enterprise was also conducted on an ad hoc basis.

At a third institution a combined committee of faculty members and administrators had for the past five years systematically studied its curriculum. Specialized and vocational courses with few students have as a consequence been notably reduced.

Even at these three colleges, curriculum shrinkage has been accomplished by the action of temporary committees. The generalization can be made that in this group of colleges no regularly established, more or less permanent machinery exists for assessing the appropriateness of, or the need for, any course presently offered.

At best, new instruction must be defended before a faculty committee. In some colleges, elected representatives of the faculty or groups appointed by the administration have established the general policy that a department may introduce a new course only if it drops an old one. In a few colleges, departments have been asked to submit statements of their over-all objectives as they relate to the institution's purposes, and to demonstrate how proposed new instruction would contribute to the achievement of these goals. Among these institutions, even this superficial supervision represents a relatively advanced and uncommon approach to the problem of curriculum control.

Moreover, these arrangements assume the propriety and need for the present amount of instruction as well as its economic feasibility, an assumption seriously challenged by the more modest offerings of some departments, and the opinions of their chairmen that their limited program was adequate to the needs of an undergraduate liberal education. One factor which sometimes resulted in the reappraisal of departmental programs and the elimination of unnecessary instruction was the retirement, death, or resignation of a department head or faculty member who had taught or defended a sequence of highly specialized courses with small enrollments. Even in these instances, however, only the intervention of the president in engaging a replacement seemed normally to prevent the uncritical continuance of the old and often the addition of new courses. In the absence of an agreement between a new department head and the president, the program continues to expand because of the absence of any regulatory agency to keep the curriculum under judicious control.

Presidents and deans almost uniformly testified that control of the curriculum in accordance with the declared purposes of the college was one of their most frustrating administrative responsibilities. Courses and the staff to teach them seemed to expand in spite of their most persistent efforts at restraint. To a large extent this creeping expansion represents the understandable ambitions of department heads to provide the fullest and best possible programs in their respective fields. But in their eagerness to gain status they have allowed Parkinson's Law to come into play.

Some workable device must be found in each institution to keep program, purposes, and pocketbook in balance. Experience suggests that the matter must be the concern not of any one group in the academic community, but of all. Evidence of what happens when one group controls the matter appeared at one institution in which the curriculum committee was composed exclusively of departmental chairmen. These individuals reached a "gentleman's agreement" that this committee would raise no questions about the instruction offered in their several units. This policy of freedom was defended on the high principle that only a specialist in a given subject was qualified to decide the courses which in his department were appropriate to a liberal arts education. The disestablishment of this committee by a new president opened the possibility for a more representative group of faculty members to eliminate courses and revise programs. This step won the general approval of the faculty, including some of the department heads, who favored a more democratic and representative procedure for making decisions regarding the proper content of a liberal education.

As opposed to allowing the control of the curriculum to rest in the hands of the department heads, the most promising means to assure continuous review of the college program suggested in the interviews was the creation of a committee composed of members of the faculty, administrators, and trustees. In addition to the three institutions already referred to which have inaugurated projects designed to reduce the range of curricular offerings, three others plan to appoint such broadly representative bodies to consider the pertinent problems in the large. None of these groups had at the time of the visits begun its work, but the exchange of ideas and joint efforts at this level were expected to produce long-range results, including the elimination of unnecessary instruction.

Summary and Conclusions

The facts presented in this chapter suggest that the success of any endeavor to improve the efficiency of operation and to enlarge institutional service through curriculum revision will depend on proper recognition of the interests and attitudes of various groups in the academic community. By their position, the presidents have the most inclusive responsibility for, and should have the broadest conception of, the college's educational program. Normally they also have final responsibility before trustee action for the financial policies of the institution. These two obligations of the office of the president are closely interrelated.

Doubtless because of their over-all responsibilities the presidents as a group perceive more clearly than any other person or group the necessity for appropriate curriculum review and revision. The results of this study show that unless the president exercises his proper initiative in moving toward this goal the educational program will be shaped largely by subject-matter pressures and departmental powers. No mechanism can be expected to emerge out of the faculty for controlling the unrestrained growth of instructional units, even though these may often be inconsistent with the purposes of liberal education, inordinately expensive, and duplicative of advanced instruction which students pursue later in graduate or professional schools. The presidents in these colleges recognize their primary responsibility to restrain such developments, but few seem to have found the way to do this.

Deans, though not aggressive in their efforts to suppress excessive proliferation of small and expensive courses, nevertheless perceive the growing corpus and cost of courses which serve the interests of few students and which to an extent undermine the declared purposes of a liberal arts college. No less than the presidents, these administrative officers can make a large contribution to any effort to restore unity and meaning to undergraduate liberal education by keeping the scope of the departmental offerings within reasonable bounds.

The day-to-day contact of deans with faculty members offers an excellent opportunity to establish trust and confidence in the administration's efforts to improve the financial well-being of the institution and of its faculty members by bringing an overexpanded program of studies within defensible bounds. Their intimate knowledge of the elements of the educational program and of the personalities of individual staff members puts them in a strategic position cooperatively to effect needed changes with a minimum of hardship and worry on the part of teachers. On the other hand, deans opposed to any restraint on the departments' freedom to expand instructional units, that is, in favor of complete departmental autonomy, can make ineffectual the policies advanced by the president and trustees to this end. In any endeavor to effect suitable controls on curriculum expansion the dean must occupy a central position.

To maintain morale while getting department heads and their staffs to restrict their offerings to essential instruction two conditions must obtain. First, a general awareness must be developed in faculties of the close relationship between the range of instruction they offer and the size of their classes, on the one hand, and the general economic condition of the institution and their own salaries, on the other. A number of studies, including the present inquiry, demonstrate these relationships. Reports of such studies should be placed in the hands of all faculty members, with the suggestion that a cooperative effort be made by all to improve the existing situation. The president's or dean's office ought also to initiate similar local studies of class size, teaching load, the offerings by level by department, and other pertinent matters relating to the general cost of institutional operation and the average salary level. The resulting facts should then be made available to all members of the academic community.

A practice which could profitably be initiated generally is in effect in a few institutions. In these the president commends publicly departments which have independently recast their offerings in terms of a realistic and unbiased study of the needs of the undergraduates they serve. A basic assumption in all these proposals, the validity of which has been demonstrated time and again, is that faculty members, when the germane facts are placed before them, will make decisions consistent with the welfare of the institution of which they are members.

Secondly, if faculties are to be expected to act in this altruistic spirit they must have assurances from trustees and administrative officers that savings realized through their efforts to design a minimal program for their respective departments will in large measure be used to raise salaries, and otherwise to improve the attractiveness of teaching.

These are the indispensable preconditions of any efforts to achieve more efficient institutional management through curricular revision. As a group, these institutions show that they have had little experience in organizing major cooperative attacks on the problems revealed in this study. In a few institutions, however, real progress has been made through cooperative action. Each institution must obviously work out its own procedures for dealing with these matters, but nothing in the lives of liberal arts colleges more deserves the dedicated consideration of all members of the academic community than the reconstruction of the curriculum to the end of a fuller service to American youth through a more efficient use of their available resources.